What is claimed is:

1. A method of treating a linear elastic member to produce localized areas of superelasticity, comprising the steps of:

providing a member formed at least in part of a linear elastic material; and

selectively heat-treating a portion of the member to a temperature sufficient to induce superelasticity in the material.

2. The method of claim 1, wherein the step of selectively heat-treating a portion of the member comprises the steps of:

providing a heating source adjacent to the member; and

applying thermal energy to the member.

3. The method of claim 2, wherein said heat source is a laser heat source.

4. The method of claim 2, wherein said heat source is an induction heat source.

5. The method of claim 2, wherein said heat source is an infrared heat source.

6. The method of claim 1, wherein the step of selectively heat-treating a portion of the member includes heating the member for a period of about 5 to 60 minutes.

7. The method of claim 1, wherein the step of selectively heat-treating a portion of the member includes heating the member at or above the final austenitic temperature A_f of the material.

8. The method of claim 1, wherein the step of selectively heat-treating a portion of the member includes heating the member at or above the starting austenitic temperature A_s of the material.

9. The method of claim 1, wherein said linear elastic material is a linear elastic nickel-titanium alloy.

10. The method of claim 1, wherein said linear elastic material is selected from the group of alloys consisting of silver-cadmium, gold-cadmium, gold-copper-zinc, copper-aluminum-nickel, copper-gold-zinc, copper-zinc, copper-zinc-aluminum, copper-zinc-tin, copper-zinc-silicon, iron-beryllium, iron-nickel-titanium-cobalt, iron-platinum, indium-thallium, iron-manganese, nickel-titanium-cobalt, and copper-tin.

11. The method of claim 1, further comprising the step of imparting a shape-memory to the material.

12. A method of treating a linear elastic member to produce localized areas of superelasticity, comprising the steps of:

providing a member formed at least in part of a linear elastic material;

providing a heat source adjacent to the member; and

selectively applying thermal energy to one or more regions on the member at a temperature sufficient to induce superelasticity in the material.

13. The method of claim 12, wherein said heat source is a laser heat source.

14. The method of claim 12, wherein said heat source is an induction heat source.

15. The method of claim 12, wherein said heat source is an infrared heat source.

16. The method of claim 12, wherein the step of selectively heat-treating a portion of the member includes heating the member for a period of about 5 to 60 minutes.

17. The method of claim 12, wherein the step of selectively heat-treating a portion of the member to a sufficient temperature includes heating the member at or above the final austenitic temperature A_f of the material.

18. The method of claim 12, wherein the step of selectively heat-treating a portion of the member includes heating the member at or above the starting austenitic temperature A_s of the material.

19. The method of claim 12, wherein said linear elastic material is a linear elastic nickel-titanium alloy.

20. The method of claim 12, wherein said linear elastic material is selected from the group of alloys consisting of silver-cadmium, gold-cadmium, gold-copper-zinc, copper-aluminum-nickel, copper-gold-zinc, copper-zinc, copper-zinc-aluminum, copper-zinc-tin, copper-zinc-silicon, iron-beryllium, iron-nickel-titanium-cobalt, iron-platinum, indium-thallium, iron-manganese, nickel-titanium-cobalt, and copper-tin.

21. The method of claim 12, further comprising the step of imparting a shape-memory to the material.

22. A method of treating a linear elastic member to produce localized areas of superelasticity, comprising the steps of:

providing a member formed at least in part of a linear elastic material;

cold-forming the member at a temperature less than the starting austenitic temperature A_s of the material to impart a shape to the member;

providing a heat source adjacent to the shaped member; and

selectively applying thermal energy to one or more regions on the shaped member at a temperature sufficient to induce superelasticity in the material.

23. A medical device, comprising:

a linear elastic member having at least one localized area of flexibility formed by selectively heating at least a portion of the member to a temperature sufficient to induce superelasticity in the member.

24. The medical device of claim 23, wherein the linear elastic member defines a wire loop.

25. The medical device of claim 23, wherein the linear elastic member defines a filter leg.

26. The medical device of claim 23, wherein the linear elastic member defines a stent.

27. The medical device of claim 23, wherein the linear elastic member defines a core wire.